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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/712,017
Filing Date: November 14, 2000
Appellant(s): PERRY ET AL.

John P. Musone
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 14, 2006 appealing from the Office action mailed November 16, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following patents have been relied upon by the Examiner in formulating the appealed rejection:

Romohor (USPN 5,596,723); and

Marullo et al. (USPN 6,185,701);

Appellant has failed to seasonably traverse the following features, and, as dictated by *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943), are considered admitted prior art:

the feature of the an F5, OAM loopback signal as claimed in claims 6, 32 and 69;

the feature of a DHCP request as claimed in claim 8;

the feature of an Internet over ATM protocol as claimed in claim 9;

the feature of a Point to Point over ATM Protocol or Point to Point over Ethernet protocol, as claimed in claim 10;

the feature of a PING signal operable to test an IP layer of the network as claimed in claims 22, and 78;

the feature of a DNS signal operable to test a transmission layer of a network as claimed in claim 23;

the feature of an HTTP request signal operable to test an application layer of the network as claimed in claim 24;

See also page 11, ¶ 28 of Final Rejection mailed November 16, 2005 regarding notification to Appellant regarding this admitted prior art.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 5, 7, 11-14, 16, 18, 21, 25, 26, 31, 33, 35-39, 41, 61, 68, 72-77, and 79 are rejected under 35 U.S.C. 102(b) as being anticipated by Romohr (USPN 5,596,723) (cited in Final Rejection dated February 10, 2005).

1. Referring to claim 5, Romohr discloses a method of providing automated assistance in configuring customer premises equipment for communication with another network element, comprising:

automatically identifying at least one of a valid virtual channel and a protocol valid for configuration with the customer premises equipment without prompting a user for information that directly or indirectly identifies the at least one of the valid virtual channel and the valid protocol, the valid virtual channel being a communications link (i.e. transmitting broadcast inquires using various frame protocols across the network) (e.g. abstract);

assisting a user in configuring the customer premises equipment for use with the identified virtual channel and/or protocol (i.e. configures itself according to the most prevalent network operating system and frame type being used in the network) (e.g. abstract; Figure 4E);

communicating over a virtual channel and toward a destination network element (it is inherent that any communication from one entity must be sent to a destination entity, even if the sender is the destination entity) a probing configuration signal, the valid virtual channel being a communications link (e.g. abstract);

receiving over the virtual channel a response to the configuration signal (i.e. counts the network operating system specific responses for each of these supported frame types) (e.g. abstract; Figure 3C, ref. 340); and

identifying as valid for configuration the at least one of the valid virtual channel and the valid protocol associated with the response (i.e. configuring the equipment based on the most prevalent network OS and frame type) (e.g. abstract);

wherein communicating the probing configuration signal comprises communicating a plurality of probing configuration signals, each signal associated with a different of the at least one of the valid virtual channel and the valid protocol (Figure 3C, ref. 332-340).

2. Referring to claim 7, Romohr discloses a signal having a self configuring protocol (i.e. ARP) (Figure 3E, ref. 352-354).

3. Referring to claims 11 and 12, Romohr discloses communicating the probing configuration signal over a plurality of virtual channels likely to return a response (i.e. frame types used in the networks) (Figure 5-5A).

4. Referring to claim 13 and 14, Romohr discloses communicating the signal over a first virtual channel, and sending a second signal over a second and same virtual channel before a time out associated with the channel or signal expires (i.e. sending

multiple inquiries using different frame types before the number of times has been expired) (Figure 3C, all).

5. Referring to claims 16, and 18, Romohr discloses communicating the probing configuration signals approximately simultaneously (i.e. one right after another) (Figure 3E).

6. Referring to claims 21 and 25, Li discloses communicating a diagnostic signal (i.e. probing signal) toward a destination network (e.g. abstract); and

determining and reporting on the connectivity of a network layer (i.e. physical layer, which is considered a network layer according to the OSI standardized model of network implementation) based on whether a response to the diagnostic signal is received (if the connection is unsuccessful, an error message is displayed) (e.g. abstract).

7. Referring to claim 26, an inherent feature of any computer on a network is that it contains a modem.

8. Claims 31, 33, 35-39, 41, 61, 68, 72-74, are rejected for similar reasons as stated in the claims above.

9. Referring to claim 75, Romohr discloses displaying the valid virtual channel and protocol to a user, receiving the user's selection and configuring the customer premises equipment for operating using the selected channel and protocol (the computer automatically configures based on the prevalent network type, however the user can manually override this based on desired selection, therefore is able to receive a user selection) (e.g. abstract; Figures 4J-M).

10. Claims 76-77, and 79 are rejected for similar reasons as stated above.

Claims 6, 8-10, 22-24, 32, 69, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romohr.

11. Referring to claim 6, Romohr discloses the invention substantively as described in claim 5. Romohr does not specifically disclose the probing configuration signal comprises an F5 Operations, Administration, and Maintenance (OAM) loopback signal. However, it is well known and that the ATM networking standard includes various types of OAM cells that carry OAM related information that are used in administrative and supervisory actions and would provide a beneficial protocol to test for in the system of Romohr. Therefore it would have been obvious to include OAM signals to the system of Romohr to further provide more efficient transfer of network monitoring information and supervisory messages to network elements, resulting in enhanced failure detection.

12. Referring to claim 8, Romohr discloses the invention substantively as described in claim 7, however does not specifically disclose the probing configuration signal includes a DHCP request, however it is well known in the art that computers utilize DHCP requests in a network to determine network connectivity and to determine which addressing modes are used in the network. By this rationale it would have been obvious to one of ordinary skill in the art to include DHCP in the protocol requests transmitted by Romohr in order to further simplify the system disclosed as well as to provide more efficient network component detection.

13. Referring to claim 9, Romohr discloses the invention substantively as described in claim 8. Romohr does not specifically disclose the protocol comprises an Internet over ATM protocol, however it is well known that the Internet over ATM protocol is widely used in networks for its reliability and ability to allow multiple networks to communicate with one another. Therefore would have been obvious to one of ordinary skill in the art to incorporate the Internet over ATM protocol to the system of Romohr to allow the internetworking of multiple LAN systems further enhancing data exchanging and message transfer.

14. Referring to claim 10, Romohr discloses the invention substantively as described in claim 8. Romohr does not specifically disclose the protocol comprises a Point to Point over ATM protocol or Point to Point over Ethernet protocol, however it is well known that both of these protocols are widely used in networks for its reliability and

secure communications between computing systems. Therefore would have been obvious to one of ordinary skill in the art to incorporate these protocols to the system of Romohr to allow further robustness of the system and provide further enhanced customer service to those users who use those protocols.

15. Referring to claim 22, Romohr discloses the invention substantively as described in claim 21. Romohr does not specifically disclose the diagnostic signal comprises a PING signal operable to test an IP layer of the network, however it is well known that a PING signal is used widely to test and determine if a network element is connected (it is well known that hackers routinely ping random IP addresses to determine which IP addresses are in use by which addresses are able to return signals to the source computer). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate a PING signal operable to test an IP layer of the network to determine if a network server is available to communicate with the interconnecting device of Romohr in order to determine which server to use in order to appropriately configure the customer premises equipment thereby providing more reliable connections and further enhancing customer service.

16. Referring to claim 23, Romohr discloses the invention substantively as described in claim 21. Romohr does not specifically disclose the diagnostic signal comprises a DNS signal operable to test a transmission layer of the network, however it is well known that a DNS signal is used widely to test and determine if the network element is

connected and able to determine their appropriate location and to what network service they are connected (when a network client is connected to a network the first time, it is routine that the computer locate the DNS server in order to configure itself with the network for settings such as name server IP address resolution, etc.). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate a DNS signal operable to test a transmission layer of the network to determine if a network server is available to communicate with the interconnecting device of Romohr in order to determine which server to use in order to appropriately configure the customer premises equipment thereby providing more reliable connections and further enhancing customer service.

17. Referring to claim 24, Romohr discloses the invention substantively as described in claim 21. Romohr does not specifically disclose the diagnostic signal comprises a HTTP request signal operable to test a application layer of the network, however it is well known that an HTTP signal is widely used to test and determine if the network element is connected and able to determine their connection capabilities under stress (numerous web server load testing systems will issue numerous HTTP GET requests in order to determine the capabilities of a particular server; furthermore it is widely known that Denial of Service attacks on servers by hackers use a flooding technique of HTTP requests in hopes to overload the server in order to produce a crash of the system). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate an HTTP signal operable to test a application layer of the network to determine if a network

server is available to communicate with the interconnecting device of Romohr in order to determine which server to use in order to appropriately configure the customer premises equipment thereby providing more reliable connections and further enhancing customer service.

18. Claims 32, 69, and 78 are rejected for similar reasons as stated above.

Claims 17, 40, and 71, are rejected under 35 U.S.C. 103(a) as being unpatentable over Romohr in view of Marullo et al. (USPN 6,185,701) (hereinafter Marullo).

19. Referring to claim 17, Romohr discloses the invention substantively as described in claim 16. Romohr further discloses communication a probing configuration signal over a plurality of virtual channels (see rejection for claims 11 and 12). Romohr does not disclose spawning a plurality of threads, and monitoring the probing configuration signal associated with each virtual channel using a separate thread. Marullo discloses spawning a plurality of threads (col. 21, lines 25-35), and monitoring the probing signal associated with each virtual channel (it is taken that each thread sets up its own virtual channel in order to communicate with the Internet) (col. 21, lines 24 to col. 22, line 17). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Marullo with Romohr to increase the functionality provide by the system while reducing the amount of human error allowed and the

subsystem is fully automated and run without user intervention, thereby freeing up users for other activities as supported by Marullo (Col. 22, lines 1-17).

20. Claims 40, and 71 are rejected for similar reasons as stated above.

(10) Response to Argument

Appellant's arguments found in the brief (i.e. sections C-F, pages 18-19) have been fully considered but are not persuasive.

Appellant argues, in substance, that (C.1) Romohor's network operating system cannot be the claimed virtual channel and therefore does not teach "identifying a valid virtual channel" (Brief, page 18), (C.2) Applicant teaches that "a virtual channel is a signal connection used to communicate signals between the CPE and the network" which contrasts with Romohor's network operating system and cannot be the claimed virtual channel (Brief, page 18), (D.1) Romohor does not disclose configuring the CPE without prompting a user for the valid virtual channel (Brief, page 18), (E.1) Romohor does not disclose configuring the CPE without retrieving the valid virtual protocol from a memory (Brief, pages 18-19), and (F.1) Romohor in view of Marullo do not disclose a plurality of threads, each thread operable to process signals associated with the virtual channel (Brief, page 19).

As to point (C.1) Appellant is misconstruing the claim language. The claim states (as can be seen in the Claims Appendix) the limitation of "automatically identifying ***at least one of*** a valid virtual channel and a valid protocol" (exemplary claim 5, emphasis added). As has been stated numerous times throughout prosecution, Romohor teaches automatically identifying *a valid protocol.* The claim does not require identification of *both* a valid channel and a valid protocol, merely *at least one of a channel and a protocol.* As such, Romohor teaches automatically identifying a valid protocol. As it is known in the art, a "communications protocol" is "a set of rules or standards designed to enable computers to connect with one another and to exchange information with as little error as possible" (Microsoft Computer Dictionary, 5th ed. © 2002). As shown in Romohor "network operating system software executing on a client computer provides the computer with the ability to...*request files from the file server and send print jobs to other server computers*" (Romohor, col. 3, lines 49-53). The operating system Appellant claims is being equated to the virtual channel is being misconstrued. It is, in essence, the valid protocol to configure the customer premises equipment. By this rationale, the rejection should be maintained.

As to point (C.2), it should be noted that the cited passages of the Appellant's Brief do not recite any recitation of this definition, however the Examiner believes this citation is to be of the disclosure (i.e. page 2, line 9; and page 4, lines 31-33), which recites that "*Typically* [CPE] must be configured to interact with...in terms of the logical signal connection – or virtual channel – between the [CPE] and the service provider"

and "communicating over a virtual channel and toward a destination network element a probing configuration signal". This passage merely means communicating a signal over a signal connection as stated in claim 68. This limitation is met by Romohor, since the protocol configuration packets are broadcasted across the network (e.g. abstract) and since a response is received (for example, Figure 3C ref. 340) then a signal connection *must* be present in order to transfer the information from the sender host to the receiver host, otherwise no communication would occur. For all other independent claims (i.e. claims 5, 21, 31, and 61) this definition is moot since, as discussed in point (C.1), the claim recites *only one of* a valid virtual channel and a valid protocol, *not both*. By this rationale, the rejection should be maintained.

As to point (D.1) once again Appellant is misconstruing the claim language. As shown above the limitation states "at least one of a valid virtual channel and a valid protocol". Romohor never prompts the user for the valid protocol, the user is only prompted to select the "AutoSetup Network Environment" menu item located on the screen (Romohor, Figure 4C). Once the user selects this option, the box "AutoSetup operation in progress. Please Wait...." Is displayed (Figure 4D), and then *the computer program selects the network configuration* (Figure 4E). Accepting this configuration is not "prompting the user for the valid virtual channel" (or even the valid protocol, for that matter). The computer never asks during the AutoSetup process what protocols are to be used or what channels are to be used. The program is completely autonomous with this regard. The user does not have to know the valid protocols, and the system "would

obviate the necessity of a network administrator having to manually configure each computer system being added to a network" (Romohor, col. 5, lines 44-46). By this rationale, the rejection should be maintained.

As to point (E.1) It is unclear what Appellant is particularly claiming with this limitation, since in the Summary of the invention (Brief, page 11) states that this feature can be found on page 5, lines 15-17 of the disclosure. However a concise reading of this section of the disclosure states that "The invention may optionally identify a valid virtual channel and/or protocol without requiring any user input, or without requiring user input associated with the valid virtual channel or protocol". This does not recite retrieving the valid virtual protocol from a memory. However, Romohor does not receive an identification of the valid virtual channel or valid protocol from memory. Romohor sends a plurality of signals out onto the network, determines what signals have elicited responses from other network devices, and then determines, based on those responses, what is the best configuration for the customer device (see Romohor, col. 6, lines 4-36). There is no "register" of Romohor which explicitly states to the AutoSetup program "the valid configuration is to use Novell NetWare with a Frame Type of Ethernet 2.3". This is why Romohor sends out probing signals, otherwise the prior art is useless. It is believed that Appellant is arguing the configuration table as the alleged "memory" in the claim. However col. 6, lines 19-20 state that if any responses are received they are added to the network configuration table. This is the same method that Appellants disclose in the specification as found on page 22, line 28 to page 23,

line 3, which specifically states the "basic search engine 232 reads a *list* 240 of valid virtual channels and protocols that *are likely to return a response*". Furthermore "configurator 230 may store valide virtual channels and/or protocols *in a found file 244 in memory 244* and may automatically configure customer premises equipment for use with valid virtual channels and/or protocols (disclosure page 23, line 33 to page 24, line 2). Therefore, the "memory" Appellant is equating with as being "read", is either being misconstrued by Appellant, or Appellant is claiming a limitation which is not supported by the specification. By this rationale, the rejection is maintained.

As to point (F.1) Appellant is incorrect that the Examiner is equating the Browser to the claimed virtual channel. Marullo discloses spawning a plurality of threads, each of which corresponds to a "virtual browser" (see Marullo, Figure 15, ref. 106). These threads 100 submit requests *independently of one another* (col. 21, lines 25-40). The threads are operable to process signals associated with at least one virtual channel (As Appellants so noted, a virtual channel is taken to mean "a signal connection used to communicate signals between the CEP and the network" found in Brief, page 19; the virtual channel signal connection is the connection between the "virtual browsers" 106 to the actual web server 54 via the WebStrain Sub System 68 using the connection between server 54 and system 68). These threads then communicate a probing signal (i.e. get or post data) to the web server 54 via the virtual channel (Marullo, col. 21, lines 31-32). One of ordinary skill in the art would recognize the benefits of utilizing the system of Marullo with the configuration system of Romohor in order to provide a

plurality of requests more rapidly where it would take more users, machines to do so regularly as shown in Marullo (col. 21, lines 15-25). By this rationale, the rejection should be maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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